

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/004175

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-18 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-7 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 8-12 _____ received by this Authority on 07.12.2004
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1-3 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 8

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☒ the claims, or said claims Nos. 8 are so inadequately supported
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 8

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See Supplemental Box for further details.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-7, 9-12	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-7, 9-12	NO
Industrial applicability (IA)	Claims	1-7, 9-12	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Document 1: JP 2001-178472 A (Fuji Photo Film Co., Ltd.), 3 July 2001, (Family: none)			
<u>Claims 1-7</u>			
<p>Document 1 cited in the international search report discloses a method for fixing a DNA sample to a solid-phase carrier wherein a DNA sample solution is brought into contact with solid-phase carrier having a photosensitive compound bonded thereto and the support is irradiated with light to form covalent bonds between the photosensitive compound and the DNA; a microarray obtained by using said method; and a detection method that uses said microarray. Document 1 also indicates that a low-molecular DNA fragment with 2-50 molecules is used as the sample (see the claims, paragraphs [0028]-[0032] and [0036] and the embodiments).</p> <p>Therefore, it would be easy for a person skilled in the art to derive the present invention by applying a low-molecular compound as the sample in the fixing method disclosed in document 1.</p> <p>Consequently, claims 1-7 do not involve an inventive step.</p>			

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Claims 9-10

The use of beads as the solid-phase carrier is known practice and therefore, claims 9-10 do not involve an inventive step.

Claims 11-12

The feature of using a solid-phase fixed compound to detect/refine a substance with mutual effect to said compound is known practice and, therefore, claims 11-12 do not involve an inventive step.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 8 discloses the feature wherein the site of the mutual effect in the low-molecular compound is identified by separating a complex using the differences in the bonding sites of the low-molecular compound, but this feature is not sufficiently disclosed for it to be possible to determine whether this is, in fact, possible.